

BookletChartTM

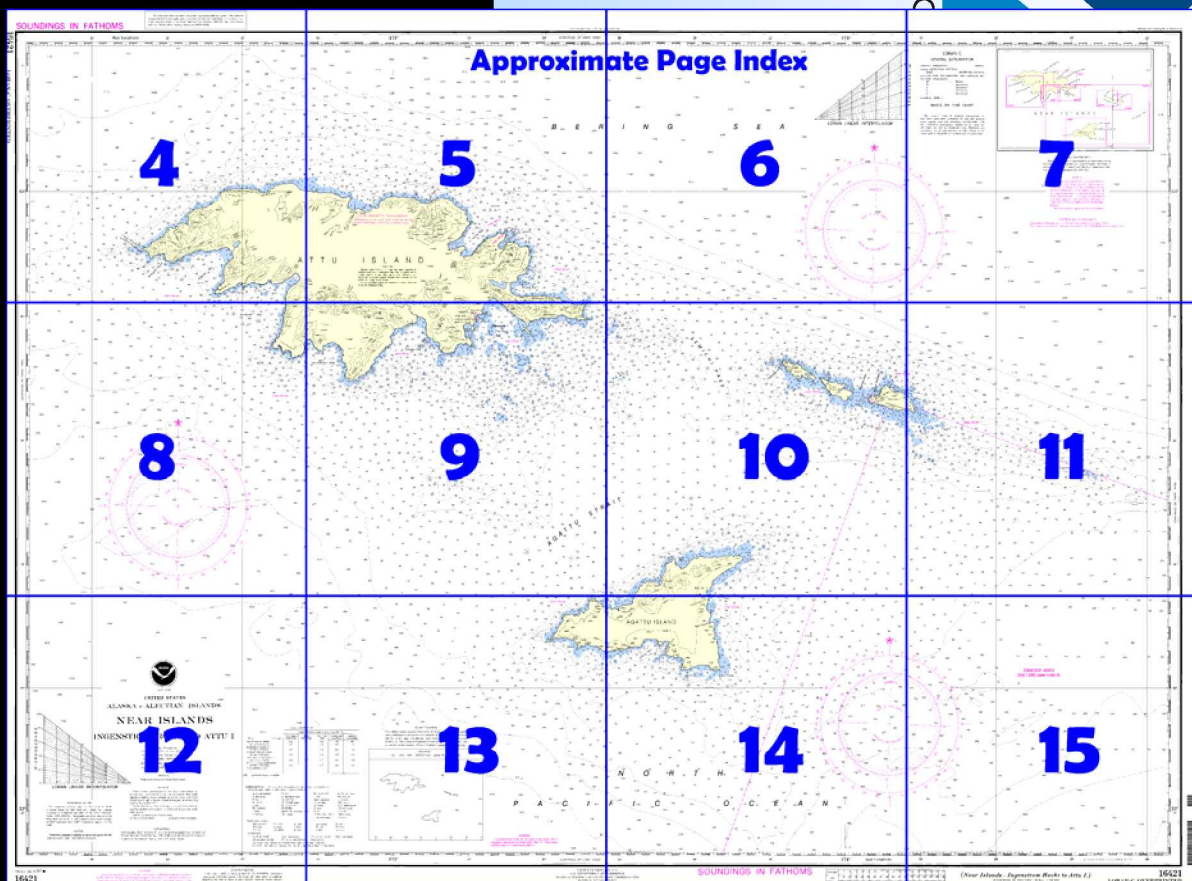
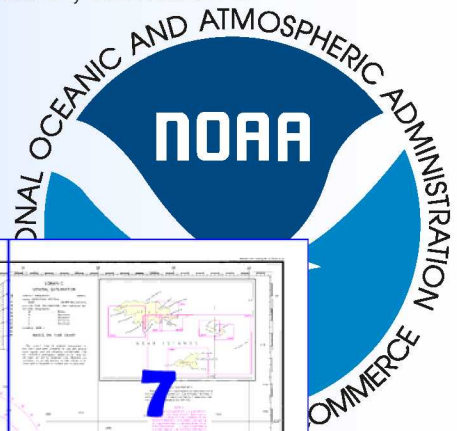
Near Islands - Ingenstrem Rocks to Attu I

(NOAA Chart 16421)

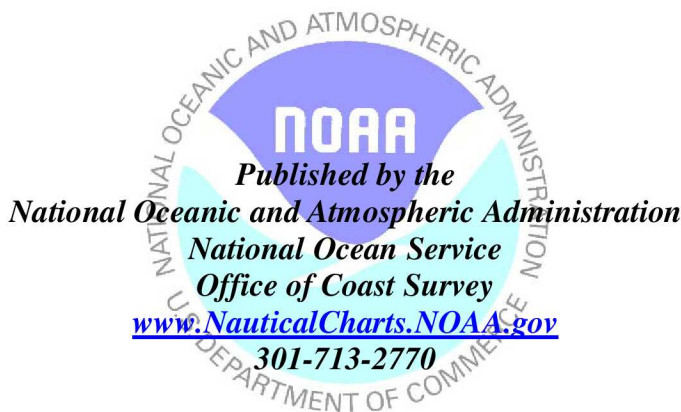


A reduced scale NOAA nautical chart for small boaters. When possible, use the full size NOAA chart for navigation.

- ✓ Complete, reduced scale nautical chart
- ✓ Print at home for free
- ✓ Convenient size
- ✓ Up to date with all Notices to Mariners
- ✓ United States Coast Pilot excerpts
- ✓ Compiled by NOAA, the nation's chartmaker.



Home Edition (not for sale)



What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

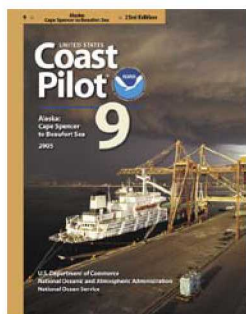
This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.



[Coast Pilot 9, Chapter 7 excerpts]

(1158) The **Semichi Islands** are Shemya, Nizki and Alaid. Shemya Island, the easternmost of the group, is about 65 miles WNW from Buldir Island. Alaid Island, the westernmost, is about 16 miles E by S from Attu. The group trends WNW over a distance of 11.5 miles. The islands have numerous lakes, are covered with tundra, and are treeless. The shores are fringed with reefs and rocks, some as far as 1 mile offshore.

(1159) Currents estimated to exceed 1 knot occur E and W of the Semichi Islands and in the passes between them. S currents have been reported in the area between the Semichi Islands and Agattu.

(1160) **Ingenstrem Rocks**, 14 miles SE from the E end of Shemya Island, is a group of four visible rocks and several others that uncover. The highest and northernmost of the group is 9 feet high. The rocks are in an area about 350 yards in diameter.

(1161) Depths of 3 to 9 fathoms extend 2.2 miles SE from the 9-foot rock. This reef probably breaks along its entire length during heavy weather. Vessels should not approach the rocks closer than 3 miles on the SE, and 2 miles on the N and W.

(1174) **Attu Island**, the westernmost of the Aleutians, is 15 by 35 miles in extent and is indented by many bays and long inlets. The terrain is rugged and has practically no large level area. The bays on Attu Island offer a striking similarity. They are apparently formed by submerged valleys between mountain ridges. The heads of the bays are fed by streams which have carried down enough sand to give a good holding ground. The exception to this is Holtz Bay, which is rock and sand. At the head of each bay is a crescent-shaped, sand beach with a more or less high bank of sand across the middle. A course down the middle of the bay, with the exception of Massacre Bay, was found to be clear; all that have been investigated show deep water close inshore. Some have rocks along the shore but these are easily seen. Anchorages are in from 10 to 15 fathoms, sand bottom. The best method is to head into the bay until these depths are reached and anchor. At the heads of most of the bays are barabaras (huts) built by the Aleuts for use during the fur-trapping season.

(1175) Strong currents may be encountered along the N coast of Attu Island, and while variable, the consensus seems to be that they follow strong winds and are noticeably affected by the weather. In calm weather the set is generally SE.

(1176) Survey operations in recent years have roughly defined tidal currents crossing the chain here, setting in a general NW and SE direction at the flood and ebb respectively, except as diverted by shoal and land areas. Slacks follow the times of local high and low water except for a lag at times as great as 1 hour.

(1208) W of Holtz Bay the N coast of Attu Island is precipitous, rugged and fairly straight for 7 miles. A number of reefs and rocks, all less than 0.3 mile from shore, are off this coast. Except for these inshore rocks this stretch of coast is free from dangers.

(1209) **Austin Cove** is an open bight about midway in this 7-mile stretch of coast. It offers some protection from S weather to small boats anchoring close inshore. A ledge terminating in a rock awash at high tide makes off the W side of the cove. A rock ledge, which projects from the inner part of the cove for 0.3 mile, must be avoided.

(1210) **Steller Cove** is a wide bight in the coast about 10 miles W of Holtz Bay. Three open coves further indent the coastline of this bight. The shoreline is bluff-lined except for the stretches of sandy beach in the middle and W coves. The only dangers to navigation are the close inshore rocks.

Local magnetic disturbance

(1211) Differences of as much as 4° from the normal variation have been observed in Steller Cove.

(1212) The westernmost of these coves offers the best anchorage. Some protection from S and W weather may be obtained here. To enter the anchorage, steer **210°**, heading about 200 yards W of a prominent grassy knoll at the head of the cove. Anchor in 8 or 9 fathoms, with a fine gray sand bottom. The holding properties of this anchorage are fair. The anchorage offers no protection, however, from N weather. A current setting E along the shore may cause a vessel to lay in the trough of the sea and roll excessively.

(1214) The only dangers from Steller Cove to the W end of Attu Island are the inshore reefs. Vessels can follow the coast with safety 1 mile or more offshore.

(1216) **Earle Cove** is at the W end of the belt of flatland. At the entrance to this small cove are several rocks but anchorage for small boats may be had in 10 fathoms 0.2 mile SW of the larger rock in the cove entrance. Another anchorage in 11 fathoms may be had 0.2 mile S of this same rock. Care should be taken in approaching the anchorage to avoid the kelp and foul ground off the E point of the cove.

Table of Selected Chart Notes

COLREGS, 80.1705 (see note A)

International Regulations for Preventing Collisions at Sea, 1972.
The entire area of this chart falls seaward of the COLREGS Demarcation Line.

HEIGHTS

Heights in feet above Mean High Water.

Mercator Projection
Scale 1:160,000 at Lat. 52° 40'
North American Datum of 1983
(World Geodetic System 1984)
SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 9. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 17th Coast Guard District in Juneau, Alaska, or at the Office of the District Engineer, Corps of Engineers in Anchorage, Alaska.
Refer to charted regulation section numbers.

LOCAL MAGNETIC DISTURBANCE
Differences of as much as 4° from the normal variation have been observed in Steller Cove. 27

LORAN-C

GENERAL EXPLANATION

LORAN-C FREQUENCY100kHz.
PULSE REPETITION INTERVAL
999099,900 Microseconds
STATION TYPE DESIGNATORS: (Not individual station letter designators)
MMaster
WSecondary
XSecondary
YSecondary
ZSecondary
EXAMPLE: 9990-X

RATES ON THIS CHART

The Loran-C lines of position overprinted on this chart have been prepared for use with ground wave signals and are presently compensated only for theoretical propagation delays which have not yet been verified by observed data. Mariners are cautioned not to rely entirely on the lattices in in-shore waters. Skywave corrections are not provided.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Notice to Mariners.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 5.891" southward and 10.907" westward to agree with this chart.

CAUTION

Only marine radiobeacons have been calibrated for surface use. Limitations on the use of certain other radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Imagery and Mapping Agency Publication 117.

Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:
○ (Accurate location) ◌ (Approximate location)

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

UPDATING SERVICE

FOR THIS CHART, a listing of NOTICE TO MARINERS corrections subsequent to the date shown in the lower left hand corner is available from the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

SOURCE DIAGRAM

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

CAUTION

This chart has been corrected from the Notice to Mariners published weekly by the National Imagery and Mapping Agency and the Local Notice to Mariners issued periodically by each U.S. Coast Guard district to the date shown in the lower left hand corner.

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	Mo morse code	R TR radio tower
Al alternating	IQ interrupted quick	N nun	Rot rotating
B black	Iso isophase	OBSC obscured	s seconds
Bn beacon	LT HO lighthouse	Oc occulting	SEC sector
C can	M nautical mile	Or orange	St M statute miles
DIA diaphone	m minutes	Q quick	VQ very quick
F fixed	MICRO TR microwave tower	R red	W white
Fl flashing	Mkr marker	Ra Ref radar reflector	WHIS whistle
		R Bn radiobeacon	Y yellow

Bottom characteristics:

Bcls boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstr obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	
(1) Wreck, rock, obstruction, or shoal swept clear to the depth indicated.			
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.			

TIDAL INFORMATION					
Place Name (Lat/Long)	Height referred to datum of soundings (MLLW)				
	Mean Higher High Water	Mean High Water	Mean Tide Level	Mean/Lower Low Water	Extreme Low Water
Steller Cove, Attu Island (52°59'N/172°54'E)	feet 3.7	feet *	feet 1.8	feet 0.0	feet -3.0
Etienne Bay, Attu Island (52°56'N/172°37'E)	3.7	*	1.8	0.0	-3.0
Massacre Bay, Attu Island (52°50'N/173°12'E)	3.3	*	1.6	0.0	-3.0
Alcon Harbor, Shemya Island (52°44'N/174°04'E)	3.4	3.1	1.7	0.0	-3.5
McDonald Cove, Agattu Island (52°28'N/173°43'E)	3.4	*	1.7	0.0	-3.0
Tide is chiefly diurnal.					

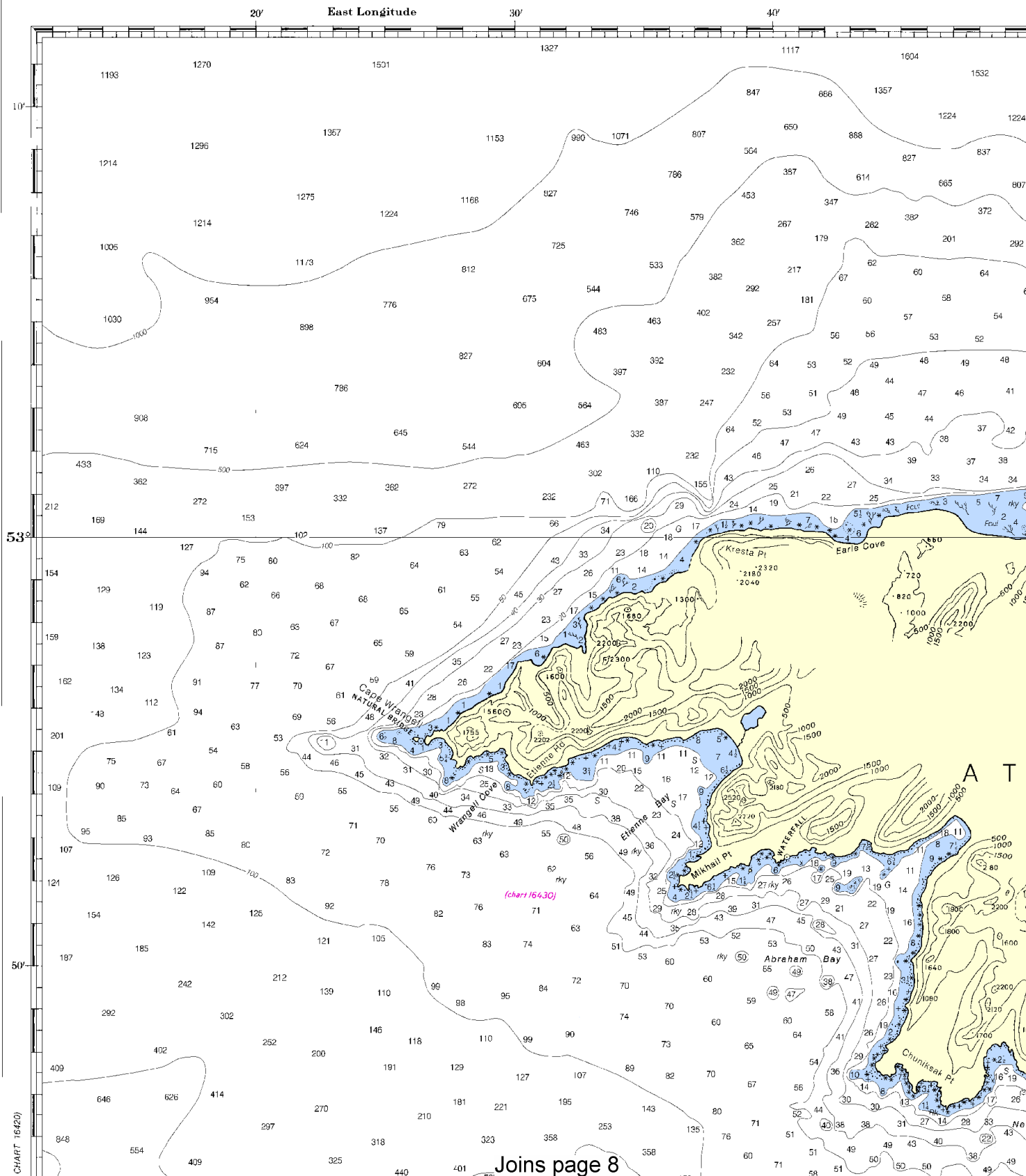
(396) (Latest information available)

SOUNDINGS IN FATHOMS

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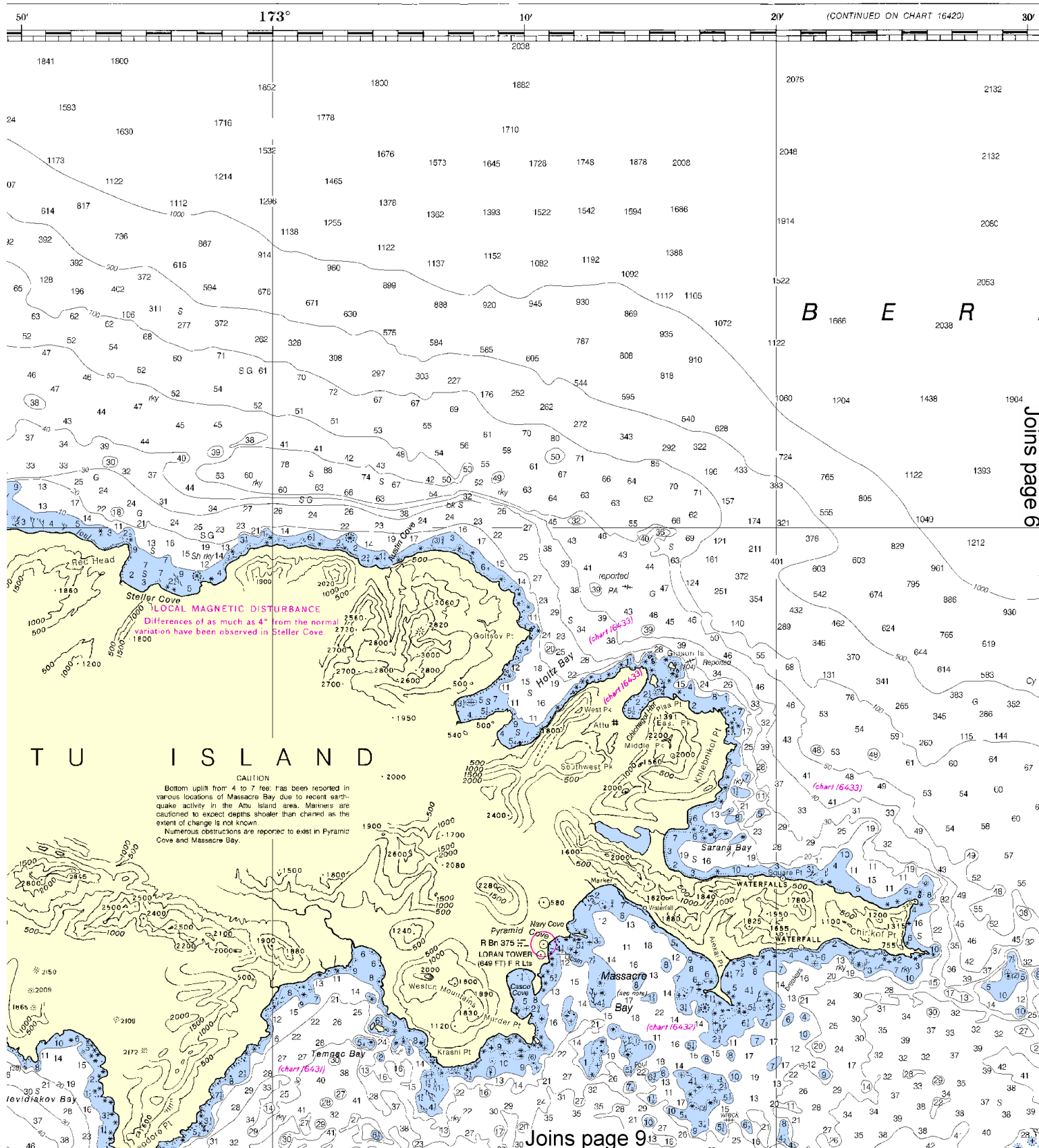
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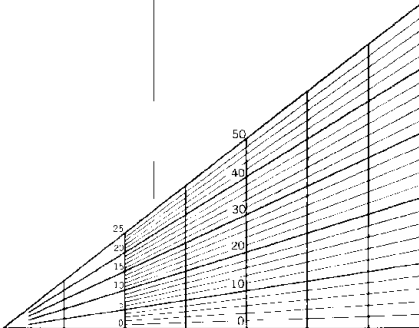


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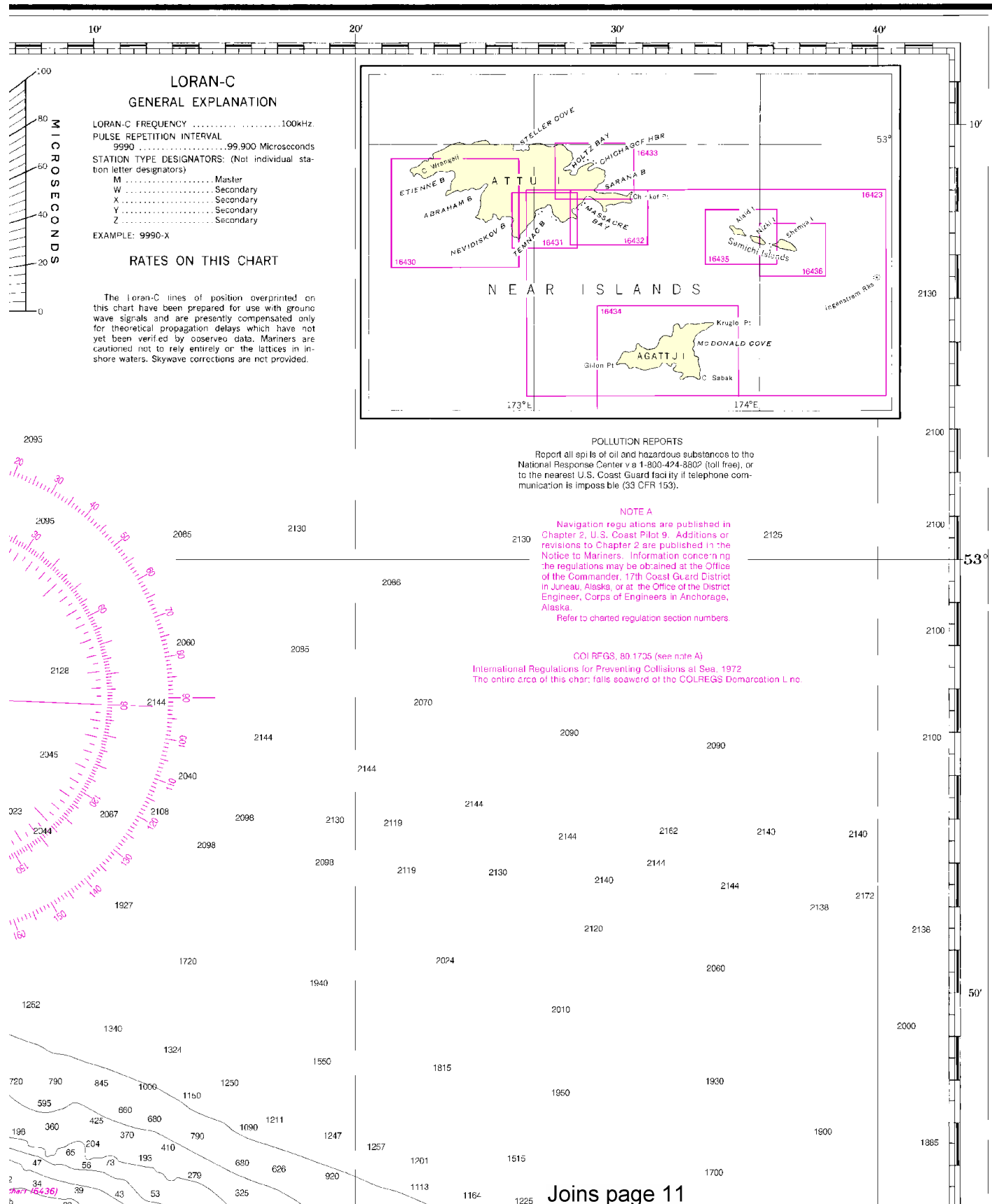
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The new scale is 1:228571. Barscales have also been reduced and
are accurate when used to measure distances in this BookletChart.

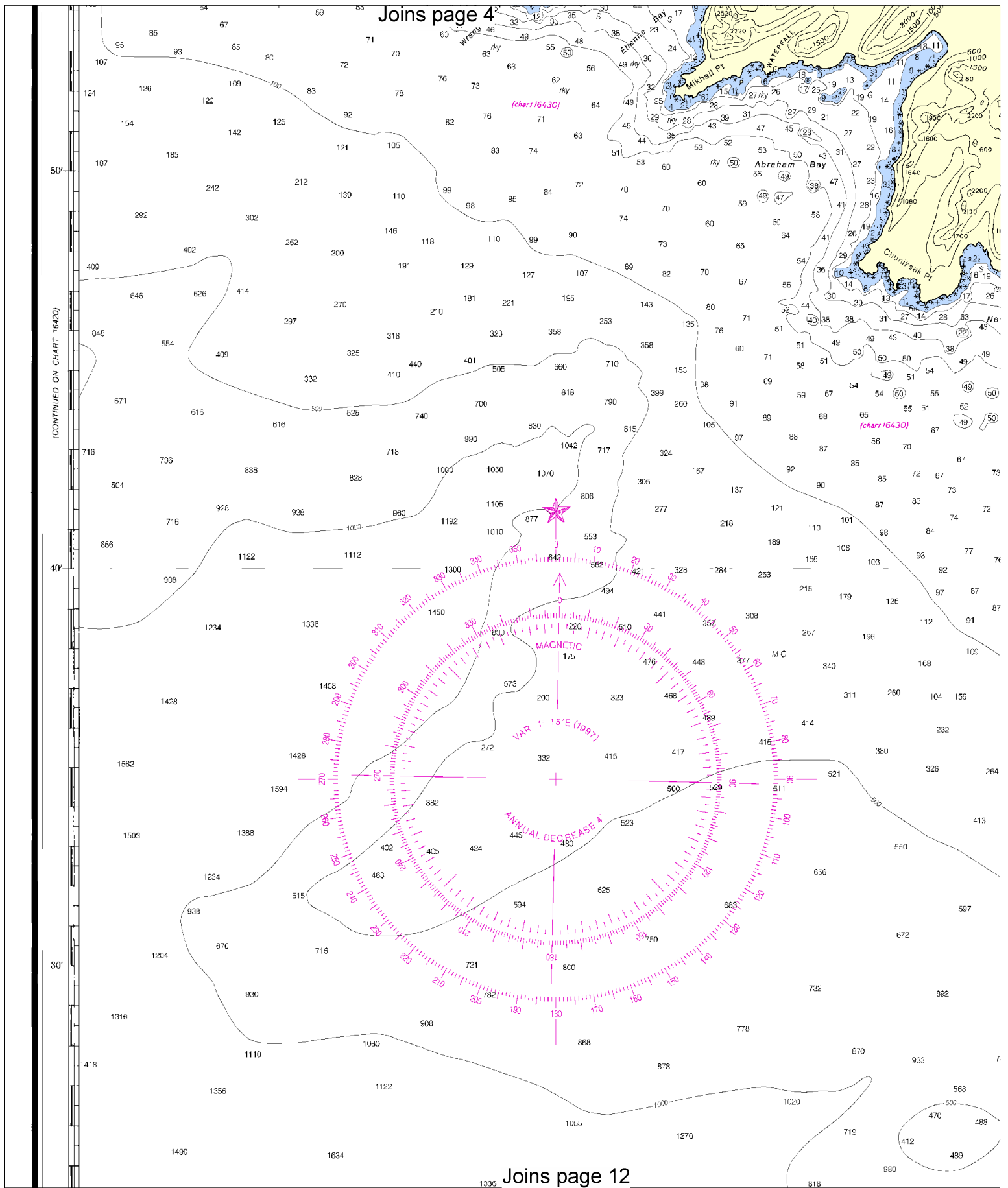


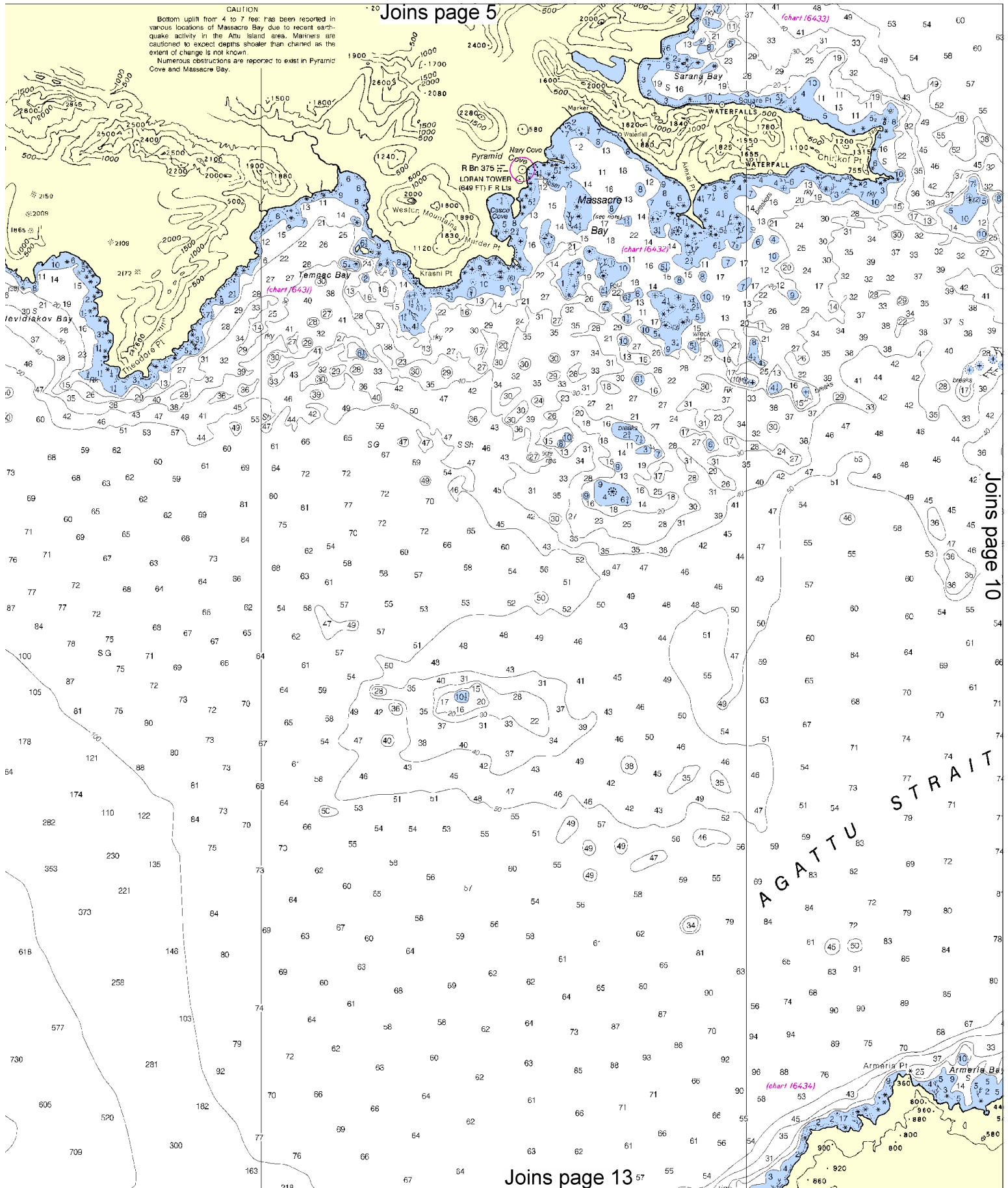
LORAN LINEAR INTERPOLATOR

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Joins page 9

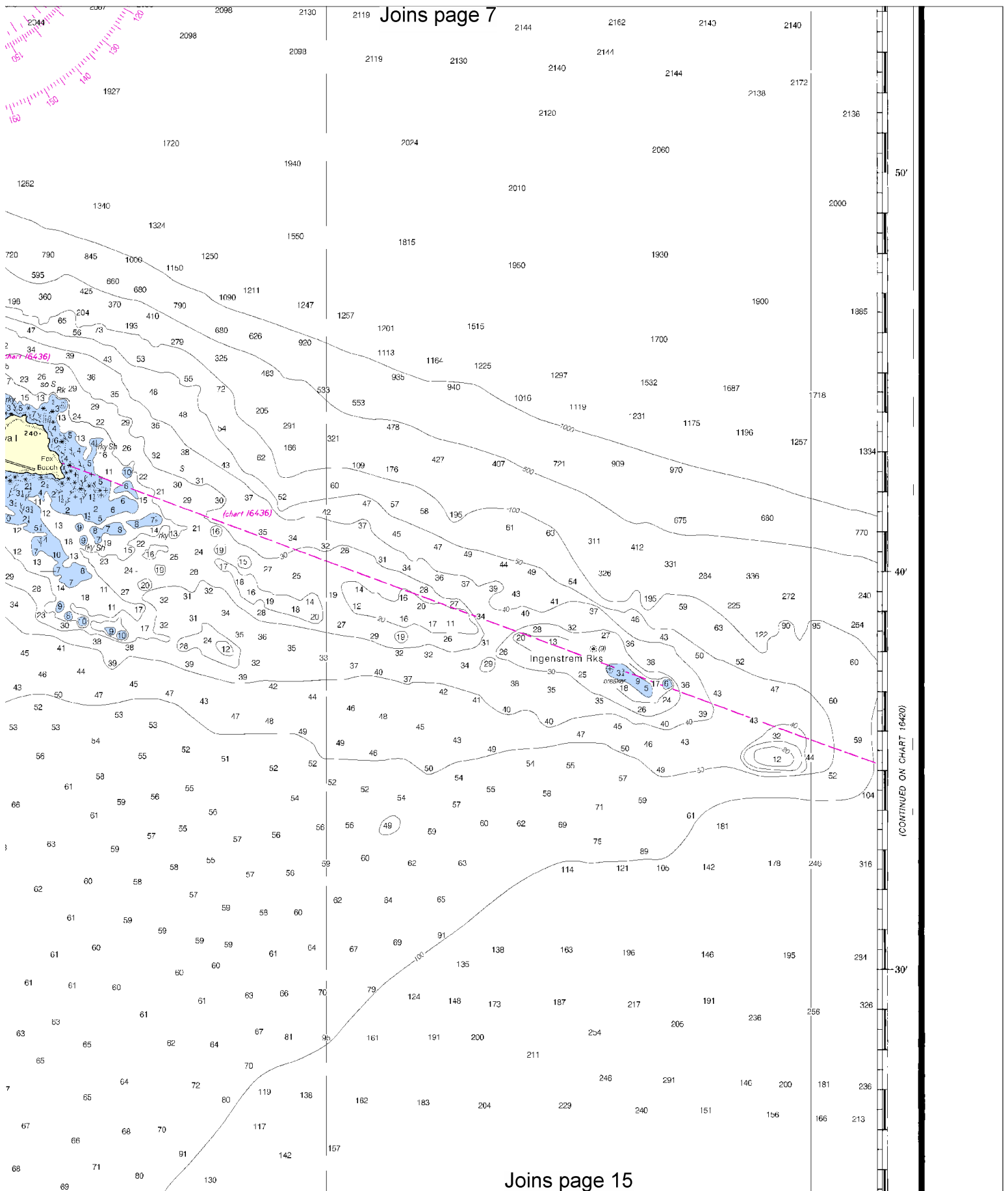
STRAIT

AGATTU ISLAND

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74
77 STRAIT 71

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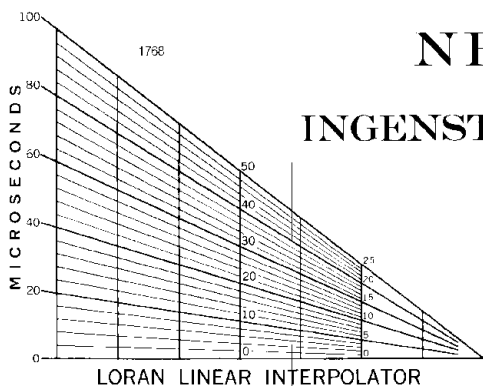


Joins page 8



UNITED STATES ALASKA - ALEUTIAN ISLANDS

NEAR ISLANDS INGENSTREM ROCKS TO ATTU I



LORAN LINEAR INTERPOLATOR

HORIZONTAL DATUM

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CAUTION

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Mercator Projection
Scale 1:160,000 at Lat. 52° 40'
North American Datum of 1983
(World Geodetic System 1984)
SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

HEIGHTS

Heights in feet above Mean High Water.

CAUTION

Only marine radio beacons have been calibrated for surface use. Limitations on the use of certain other radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Imagery and Mapping Agency Publication 117.

Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:
⊙ (Accurate location) ○ (Approximate location)

AUTHORITIES

Hydrography (from surveys of 1943-48) and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

TIDAL INFORMATION

Place Name (Lat/Long)	Height referred to:	
	Mean Higher High Water	Mean High Water
Steller Cove, Attu Island (52°59'N/172°54'E)	3.7	x
Elmendorf Bay, Attu Island (52°56'N/172°37'E)	3.7	x
Mossy Bay, Attu Island (52°50'N/173°12'E)	3.3	x
Alekh Harbor, Shemya Island (52°41'N/174°04'E)	3.4	3.1
McDonald Cove, Agat Island (52°28'N/173°43'E)	3.4	x
Tide is chiefly diurnal.		

(306) (Latest information available)

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Aids to Navigation (lights are white unless otherwise indicated):

AEPO aeroneutral	G groon	Mo
AI alternating	IC interrupted quick	N
B black	ISO soprass	OB
En beacon	LT HO light house	OC
C can	M radical mile	Or
DIA diaphone	m minutes	Q
F fixed	MICRO TR microwave tower	R
Fl flashing	Mkr marker	R

Bottom characteristics:			
Blds boulders	Co coral	gy gray	C
bk broken	G gravel	h hard	F
Cy clay	Gs grass	M mud	S

Miscellaneous			
AUTH authorized	Obstr obstruction	PD pr	
ED existence doubtful	PA position approximate	Rep r	
Wl wreck, rock, obstruction, or shoal swept clear to the depth of			
(2) Rocks that cover and uncover, with heights in feet above ds			

10th Ed., July 12/97

16421

LORAN-C OVERPRINTED

CAUTION

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UPDATING SERVICE

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12



AGATTU

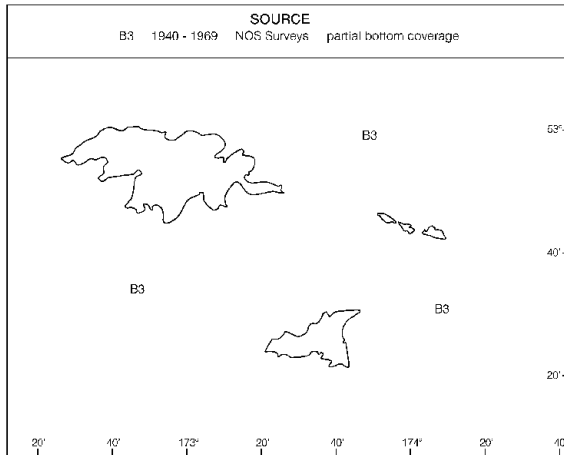
Joins page 14

to datum of soundings (MLLW)

Mean Tide Level	Mean Lower Low Water	Extreme Low Water
feet	feet	feet
1.8	0.0	-3.0
1.8	0.0	-3.0
1.6	0.0	-3.0
1.7	0.0	-3.5
1.7	0.0	-3.0

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

SOURCE DIAGRAM



use Chart No. 1)

Mo micro code
N nun
OBSC obscured
Oc occulting
Or orange
Q quick
R red
Ra Ref radar reflector
R Bn radiobeacon

R R radio tower
Rot rotating
s seconds
SEC sector
SM M statute mile
VU very quick
W white
WHIS whistle
Y yellow

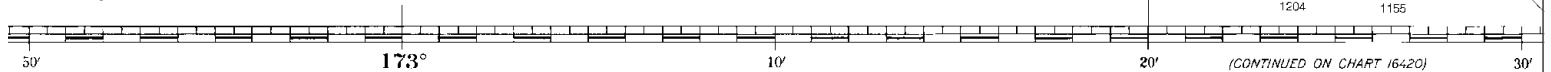
Cys cysters
Rk rock
S sand

sc soft
Sh shells
sy sticky

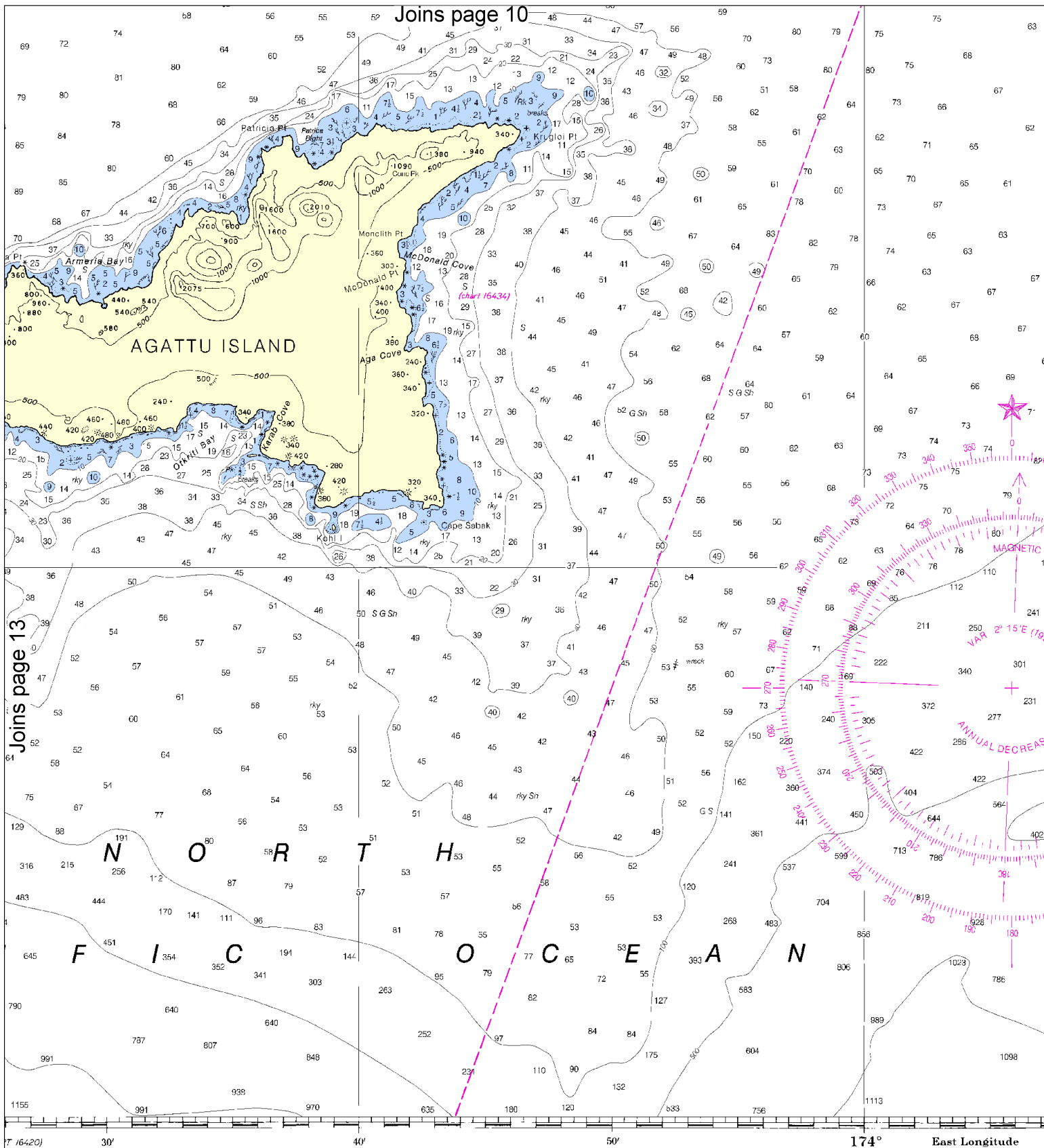
position doubtful
preported
th indicated
datum of soundings

Subm submerged

WARNING
The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.



Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY



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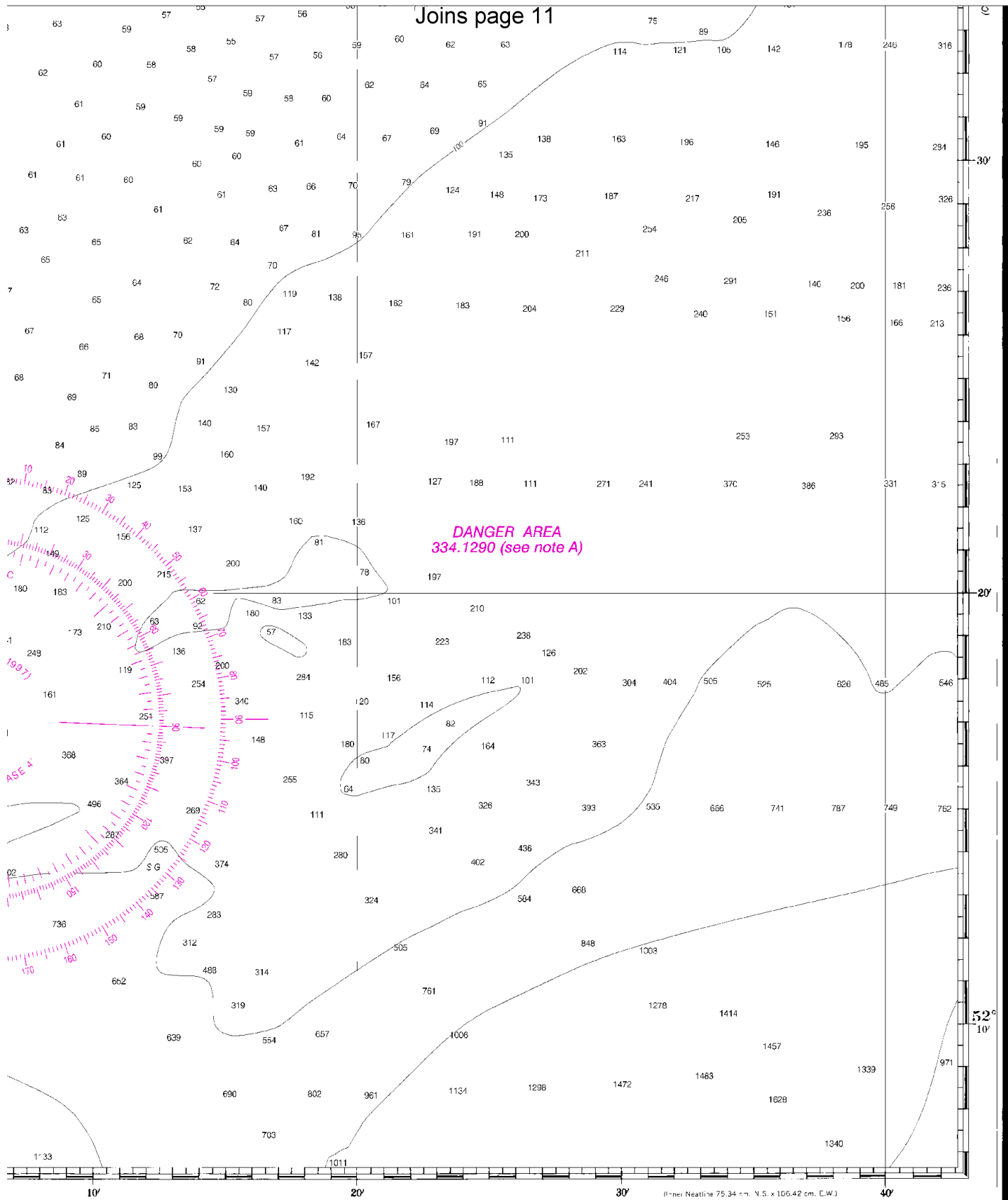
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANIC SERVICE
NAUTICAL SURVEY

SOUNDINGS IN FATHOMS

FATHOMS	1	2	3	4	5	6	7	8	9	10
FFFT	6	12	18	24	30	36	42	48	54	60
METERS	1	2	3	4	5	6	7	8	9	10

14





10	11	12	13	14	15	16	17
60	65	72	76	84	90	96	02
18	19	20	21	22	23	24	25
26	27	28	29	30	31		

(Near Islands - Ingenstrem Rocks to Attu I.)

SOUNDINGS IN FATHOMS - SCALE 1:160,000

16421
LORAN-C OVERPRINTED



ED NO. 10

NSN 764201 4011237
NIMA STOCK NO. 16AC016421

EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.

Channel 9 – Communications between boats and ship-to-coast.

Channel 13 – Navigation purposes at bridges, locks, and harbors.

Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.

Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

Channels 68, 69, 71, 72 & 78A – Recreational boat channels.

Distress Call Procedures

1. Make sure radio is on.
2. Select Channel 16.
3. Press/Hold the transmit button.
4. Clearly say: "MAYDAY, MAYDAY, MAYDAY."
5. Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
6. Release transmit button.
7. Wait for 10 seconds – If no response Repeat MAYDAY Call.

HAVE ALL PERSONS PUT ON LIFE JACKETS !!

Mobile Phones – Call 911 for water rescue.

Coast Guard Search & Rescue (Pacific Coord) – 510-437-3700

Coast Guard Search & Rescue (RCC Juneau) – 907-463-2000

NOAA Weather Radio – 162.400 MHz, 162.425 MHz, 162.450 MHz, 162.475 MHz, 162.500 MHz, 162.525 MHz, 162.550 MHz.

Getting and Giving Help – Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.



NOAA CHARTING PUBLICATIONS

Official NOAA Nautical Charts – NOAA surveys and charts the national and territorial waters of the U.S, including the Great Lakes. We produce over 1,000 traditional nautical charts covering 3.4 million square nautical miles. Carriage of official NOAA charts is mandatory on the commercial ships that carry our commerce. They are used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters. NOAA charts are available from official chart agents listed at: www.NauticalCharts.NOAA.gov.

Official Print-on-Demand Nautical Charts – These full-scale NOAA charts are updated weekly by NOAA for all Notice to Mariner corrections. They have additional information added in the margin to supplement the chart. Print-on-Demand charts meet all federal chart carriage regulations for charts and updating. Produced under a public/private partnership between NOAA and OceanGrafix, LLC, suppliers of these premium charts are listed at www.OceanGrafix.com.

Official Electronic Navigational Charts (NOAA ENC[®]) – ENCs are digital files of each chart's features and their attributes for use in computer-based navigation systems. ENCs comply with standards of the International Hydrographic Organization. ENCs and their updates are available for free from NOAA at www.NauticalCharts.NOAA.gov.

Official Raster Navigational Charts (NOAA RNC[™]) – RNCs are geo-referenced digital pictures of NOAA's charts that are suitable for use in computer-based navigation systems. RNCs comply with standards of the International Hydrographic Organization. RNCs and their updates are available for free from NOAA at www.NauticalCharts.NOAA.gov.

Official BookletCharts[™] – BookletCharts[™] are reduced scale NOAA charts organized in page-sized pieces. The "Home Edition" can be downloaded from NOAA for free and printed. The Internet address is www.NauticalCharts.gov/bookletcharts.

Official PocketCharts[™] – PocketCharts[™] are for beginning recreational boaters to use for planning and locating, but not for real navigation. Measuring a convenient 13" by 19", they have a 1/3 scale chart on one side, and safety, boating, and educational information on the reverse. They can be purchased at retail outlets and on the Internet.

Official U.S. Coast Pilot[®] – The Coast Pilots are 9 text volumes containing information important to navigators such as channel descriptions, port facilities, anchorages, bridge and cable clearances, currents, prominent features, weather, dangers, and Federal Regulations. They supplement the charts and are available from NOAA chart agents or may be downloaded for free at www.NauticalCharts.NOAA.gov.

Official On-Line Chart Viewer – All NOAA nautical charts are viewable here on-line using any Internet browser. Each chart is up-to-date with the most recent Notices to Mariners. Use these on-line charts as a ready reference or planning tool. The Internet address is www.NauticalCharts.gov/viewer.

Official Nautical Chart Catalogs – Large format, regional catalogs are available for free from official chart agents. Page size, state catalogs are posted on the Internet and can be printed at home for free. Go to <http://NauticalCharts.NOAA.gov/mcd/ccatalogs.htm>.

Internet Sites: www.NauticalCharts.NOAA.gov, www.NOAA.gov, www.TidesandCurrents.NOAA.gov, www.NOS.NOAA.gov.